

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A linear displacement system (10) for a base carriage (3) mounted so that it can be displaced freely on a flat floor surface (8), in particular as part of a motion unit (1) for a driving simulator (2) to generate motion impressions for test persons, wherein
 - the linear displacement system (10) comprises comprising a drive unit (12) for controlled pulling and/or pushing of the base carriage (3) relative to the floor surface (8),
 - and the linear displacement system (10) comprises comprising a guide frame (11) which spans the movement space of the base carriage (3) in the movement direction (Y),
~~characterized in that~~
 - the linear displacement system (10) has a motor carriage (15) which can be displaced freely on the flat floor surface (8) and can be displaced relative to the guide frame (11) with the aid of the drive unit (12), and
 - ~~and in that~~ the base carriage (3) is joined to the motor carriage (15) rigidly or via an articulation (16).
2. (currently amended) The linear displacement system as claimed in claim 1, ~~characterized in that~~ wherein the base

carriage (3) is mounted relative to the floor surface (8) via air bearings (9) and/or air cushions.

3. (currently amended) The linear displacement system as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the motor carriage (15) is mounted relative to the floor surface (8) via air bearings (17) and/or air cushions.
4. (currently amended) The linear displacement system as claimed in claim 1 ~~one of claims 1 to 3~~, ~~characterized in that~~ wherein the base carriage (3) is joined to two motor carriages (15, 15') which are arranged offset relative to each other and can both be displaced synchronously with each other relative to the guide frame (11) with the aid of a drive unit (12, 12').
5. (currently amended) The linear displacement system as claimed in claim 1 ~~one of claims 1 to 4~~, ~~characterized in that~~ wherein the drive unit (12) is an electromagnetic linear drive (18).
6. (currently amended) The linear displacement system as claimed in claim 5, ~~characterized in that~~ wherein the electromagnetic linear drive (18) is designed as a synchronous drive (19), comprising:
 - ~~having~~ at least one primary coil (21) integrated in the motor carriage (15), and

- and a plurality of permanent magnets (20) integrated in the guide frame (11).

7. (currently amended) The linear displacement system as claimed in claim 6, ~~characterized in that~~ wherein the permanent magnets (20) of the guide frame (11) are configured as flat panels (24) which are aligned in a row along the displacement direction (Y) of the linear drive (18) and are engaged on both sides by two primary coils (21) integrated in the motor carriage (15).
8. (currently amended) The linear displacement system as claimed in claim 1 one of claims 1 to 7, ~~characterized in that~~ wherein the motor carriage (15) is supported and guided relative to the guide frame (11) with the aid of an air bearing (25).
9. (currently amended) The linear displacement system as claimed in claim 1 one of claims 1 to 8, ~~characterized in that~~ wherein the base carriage (3) is joined to the motor carriage (3) by a rotary articulation (16).
10. (currently amended) The linear displacement system as claimed in claim 9, ~~characterized in that~~ wherein the rotary articulation is arranged at a height (28) which corresponds to the height of the center of mass of the

combination of the base carriage (3) and a load (4, 5, 6) arranged on the base carriage (3).

11. (currently amended) The linear displacement system as claimed in claim 1 ~~one of claims 1 to 10, characterized in that wherein~~ the base carriage (3) is connected on the opposite side (29) from the motor carriage or carriages (15, 15') via a rotary articulation (32) to a head support (30) mounted so that it can be displaced relative to the floor surface (8).
12. (currently amended) The linear displacement system as claimed in claim 11, ~~characterized in that wherein~~ the head support (30) is supported relative to the base carriage (3) via coupling elements (33).